

Figure 1

(I) DNA sequence of FIP-yeast :

```
ATGTCTGATA CTGCTTTGAT TTTCAGATTG GCTTGGGATG TTAAGAAGTT
GTCTTTCGAT TACACTCCAA ACTGGGGTAG AGGTAACCCA AACAACTTCA
TGATACTGTT ACTTTCCCAA AGGTTTTGAC TGATAAGGCT TACACTTACA
GAGTTGCTGT TTCTGGTAGA AACTTGGGTG TTAAGCCATC TTACGCTGTT
GAATCTGATG GTTCTCAAAA GGTTAACTTC TTGGAATACA ACTCTGGTTA
CGGTATTGCT GATACTAACA CTATTCAAGT TTTCGTTGTT GATCCAGATA
CTAACAAACGA TTTCATTATT GCTCAATGGA ACTGA
```

(II) DNA sequence of FIP-lz :

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ATGTCCGACA CTGCCTTGAT CTTCAGGCTC GCCTGGGACG TGAAGAAGCT
CTCGTTCGAC TACACCCCGA ACTGGGGCCG CGGCAACCCC AACAACTTCA
TCGACACTGT CACCTTCCCG AAAGTCTTGA CCGACAAGGC GTACACGTAC
CGCGTCGCCG TCTCCGGACG GAACCTCGGC GTGAAACCCT CGTACGCGGT
CGAGAGCGAC GGCTCGCAGA AGGTCAACTT CCTCGAGTAC AACTCCGGGT
ATGGCATAGC GGACACGAAC ACGATCCAGG TGTTTCGTTGT CGACCCCGAC
ACCAACAACG ACTTCATCAT CGCCCAGTGG AACTAG
```

Figure 2

(I) Primer sequences of FIP-yeast (*Saccharomyces cerevisiae* codon) :

i. forward primer

AAAAAAAAAA GGATCCCGCA ATGTCTGATA CTGCTTTGAT

*Bam*HI

ATGTCTGATA CTGCTTTGAT TTTCAGATTG GCTTGGGATG TTAAGAAGTT GTCTTTTCGAT
AGGTAACCCA AACAACTTCA TTGATACTGT TACTTTCCCA AAGGTTTTGA CTGATAAGGC
TTTCTGGTAG AAACCTGGGT GTTAAGCCAT CTTACGCTGT TGAATCTGAT GGTTCCTCAA
AACTCTGGTT ACGGTATTGC TGATACTAAC ACTATTCAAG TTTTCGTTGT TGATCCAGAT

ii. reverse primer

AAAAAAAAAA ACACGTGTCA ACTAGTTAGT TCCATTGAGC A

*Pml*I

CTAGTTAGTT CCATTGAGCA ATAATGAAAT CGTTGTTAGT ATCTGGATCA ACAACGAAAA
GCAATACCGT AACCAGAGTT GTATTCCAAG AAGTTAACCT TTTGAGAACC ATCAGATTCA
ACCCAAGTTT CTACCAGAAA CAGCAACTCT GTAAGTGTA GCCTTATCAG TCAAAACCTT
TGAAGTTGTT TGGGTACCT CTACCCAGT TTGGAGTGTA ATCGAAAGAC AACTTCTTAA

(II) Primer sequence of FIP-lz (*Ganoderma lucidum* codon) :

i. forward primer

AAAAAAAAAA GGATCCCGCA ATGTCCGACA CTGCCTTGAT C

*Bam*HI

ATGTCCGACA CTGCCTTGAT TTCAGGCTCG CCTGGGACGT GAAGAAGCTC TCGTTCTGACT
GGCAACCCCA ACAACTTCAT CGACACTGTC ACCTTCCCGA AAGTCTTGAC CGACAAGGCG
CTCCGGACGG AACCTCGGCG TGAAACCCTC GTACGCGGTC GAGAGCGACG GCTCGCAGAA
ACTCCGGGTA TGGCATAGCG GACACGAACA CGATCCAGGT GTTCGTTGTC GACCCCGACA

ii. reverse primer

AAAAAAAAAA ACACGTGTCA ACTAGTTAGT TCCCTAGTTC CA

*Pml*I

CTAGTTAGTT CCCTAGTTCC ACTGGGCGAT GATGAAGTCG TTGTTGGTGT CGGGGTCGAC
ACGTGTCCGC TATGCCATAC CCGGAGTTGT ACTCGAGGAA GTTGACCTTC TGCGAGCCGT
CGTTTCACGC CGAGGTTCCG TCCGGAGACG GCGACGCGGT ACGTGTACGC CTTGTGCGTC
AGTGTGATG AAGTTGTTGG GGTGCGCGG GCCCAGTTC GGGGTGTAGT CGAACGAGAG C

Figure 3

<i>Ganoderma lucidum</i>	MSDTAL I FRL AWDVKKLSFD YTPNWGRGNP
<i>Ganoderma tsugae</i>	MSDTAL I FRL AWDVKKLSFD YTPNWGRGNP
<i>Flamnulina velutips</i>	SATSLT FQL A YLVKKIDFD YTPNWGRGTP

<i>Ganoderma lucidum</i>	NNFIDTVTFP KVLTDKAYTY RVAVSGRNLG
<i>Ganoderma tsugae</i>	NNFIDTVTFP KVLTDKAYTY RVAVSGRNLG
<i>Flamnulina velutips</i>	SSYIDNLTFP KVLTDKKYSY RVVNGSDLG

<i>Ganoderma lucidum</i>	VKPSYAVESD GSQKVNFLY NSGYG I ADTN
<i>Ganoderma tsugae</i>	VKPSYAVESD GSQKVNFLY NSGYG I ADTN
<i>Flamnulina velutips</i>	VESNFAVTPS GGQTINFLQY NKGYG V ADTK

<i>Ganoderma lucidum</i>	TIQVFVDPD TNND F IIAQWN
<i>Ganoderma tsugae</i>	TIQVFVDPD TNND F IIAQWN
<i>Flamnulina velutips</i>	TIQVFV PD TGNSEYIIAEWKKT

Figure 4

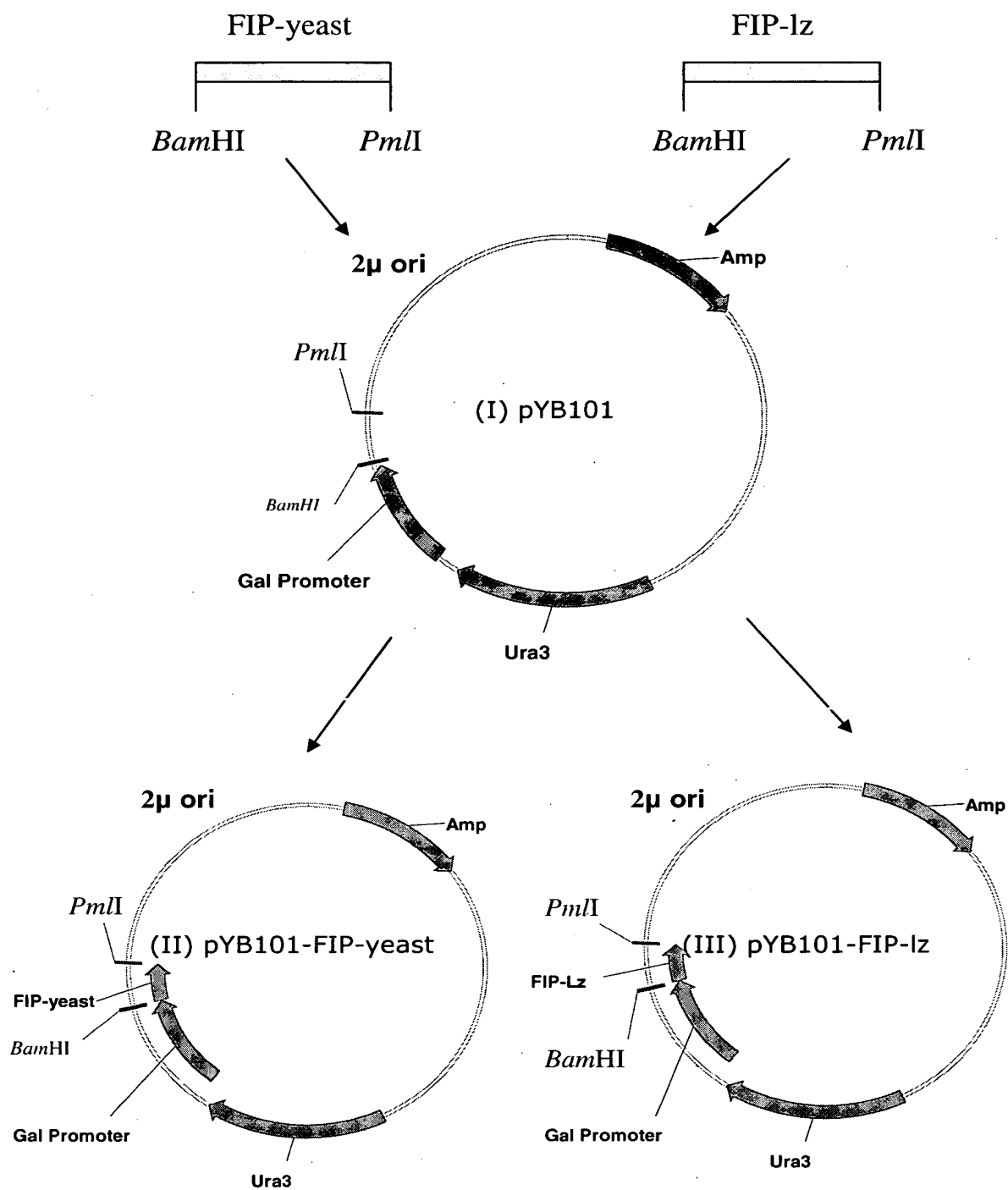
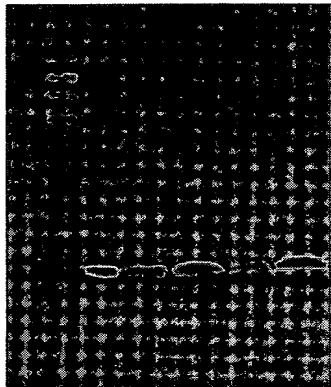


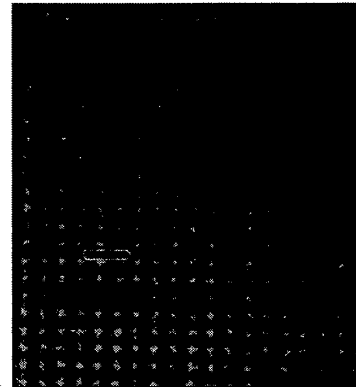
Figure 5

(I) pYB101-FIP-yeast



M S 1 2 3 4

(II) pYB101-FIP-lz



M S 5 6 7 8

Figure 6

(I) forward primer

AAAAACTCGA GAAAAGAGAG GCTGAAGCTA TGTCCGACAC TGCCTTGAT

*Xho*I

(II) reverse primer

AAAAACACGT GTCAACTAGT TAGTTCCATT G

*Pml*II

Figure 7


<u>α-factor leader sequence</u>														
CGG	TAC	CCG	G <u>GG</u> <u>ATC</u>	<u>CAA</u>	ACG	Met	Arg	Phe	Pro	Ser	Ile	Phe	Thr	
			<i>Bam</i>HI			ATG	AGA	TTT	CCT	TCA	ATT	TTT	ACT	
Ala	Val	Leu	Phe	Ala	Ala	Ser	Ser	Ala	Leu	Ala	Ala	Pro	Val	Asn
GCA	GTT	TTA	TTC	GCA	GCA	TCC	TCC	GCA	TTA	GCT	GCT	CCA	GTC	AAC
Thr	Thr	Thr	Glu	Asp	Glu	Thr	Ala	Gln	Ile	Pro	Ala	Glu	Ala	Val
ACT	ACA	ACA	GAA	GAT	GAA	ACG	GCA	CAA	ATT	CCG	GCT	GAA	GCT	GTC
Ile	Gly	Tyr	Ser	Asp	Leu	Glu	Gly	Asp	Phe	Asp	Val	Ala	Val	Leu
ATC	GGT	TAC	TCA	GAT	TTA	GAA	GGG	GAT	TTC	GAT	GTT	GCT	GTT	TTG
Pro	Phe	Ser	Asn	Ser	Thr	Asn	Asn	Gly	Leu	Leu	Phe	Ile	Asn	Thr
CCA	TTT	TCC	AAC	AGC	ACA	AAT	AAC	GGG	TTA	TTG	TTT	ATA	AAT	ACT
Thr	Ile	Ala	Ser	Ile	Ala	Ala	Lys	Glu	Glu	Gly	Val	Ser	Leu	Glu
ACT	ATT	GCC	AGC	ATT	GCT	GCT	AAA	GAA	GAA	GGG	GTA	TCT	<u>CTC</u>	<u>GAG</u>
<i>Xho</i>I														
, Signal cleavage site														
Lys	Arg	Glu	Ala	Glu	Ala	Met	Ser	Asp	Thr	Ala	Leu	Ile	Phe	Arg
AAA	AGA	GAG	GCT	GAA	GCT	ATG	TCC	GAC	ACT	GCC	TTG	ATC	TTC	AGG
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FIP DNA sequence														

Figure 8

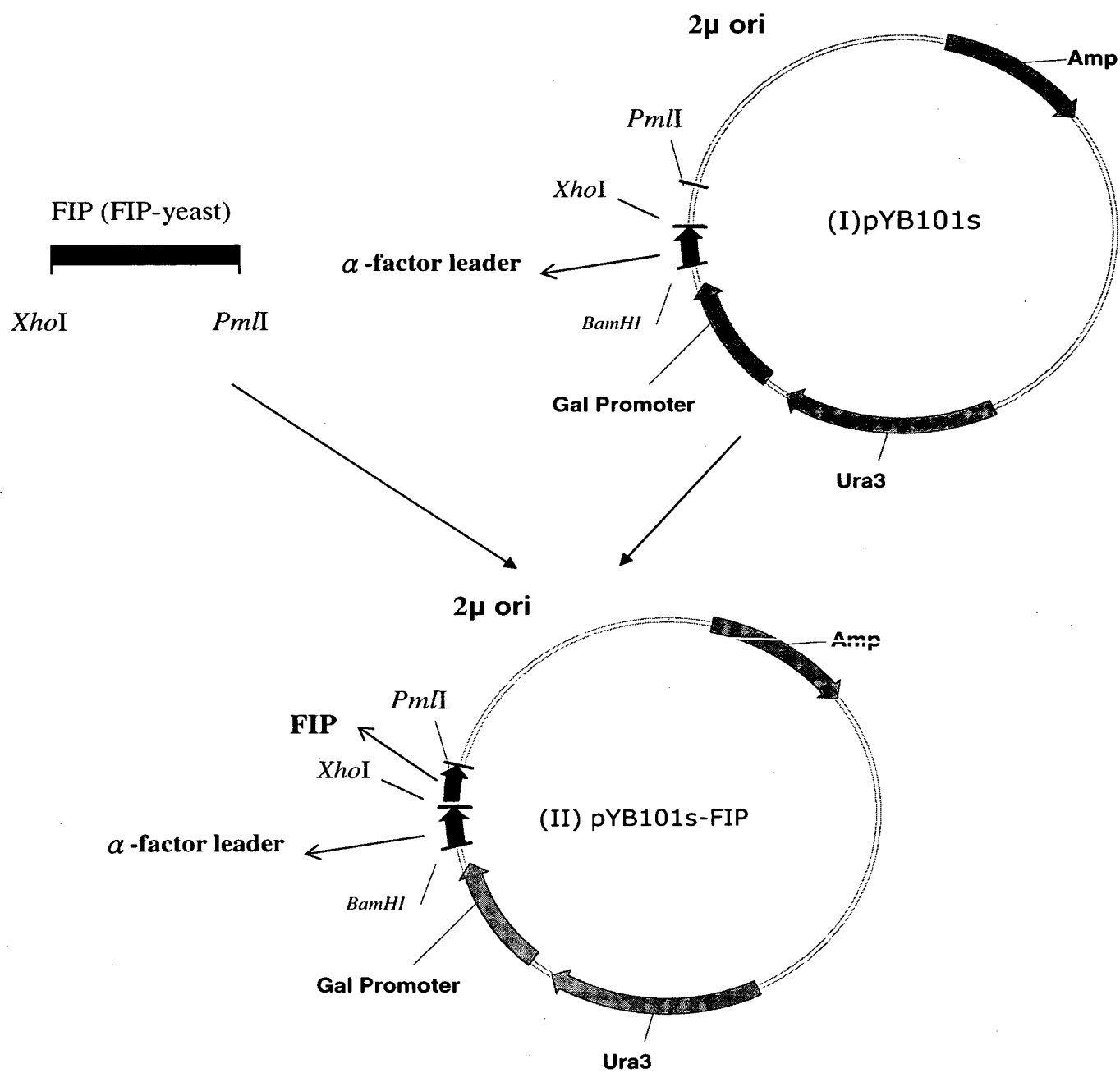


Figure 9

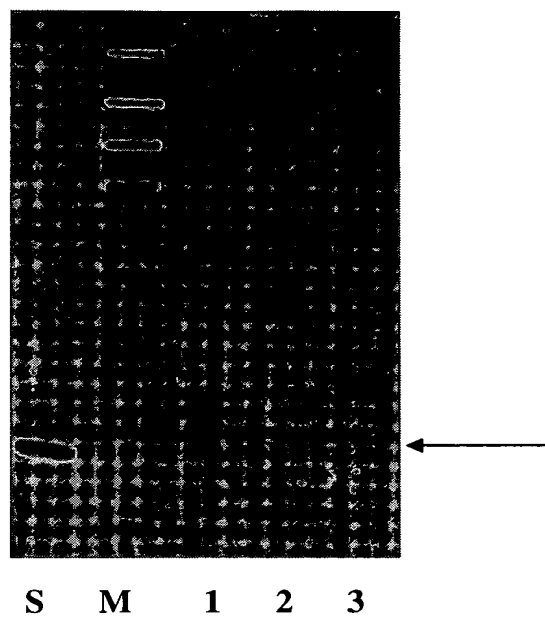


Figure 10



M S F

Figure 11

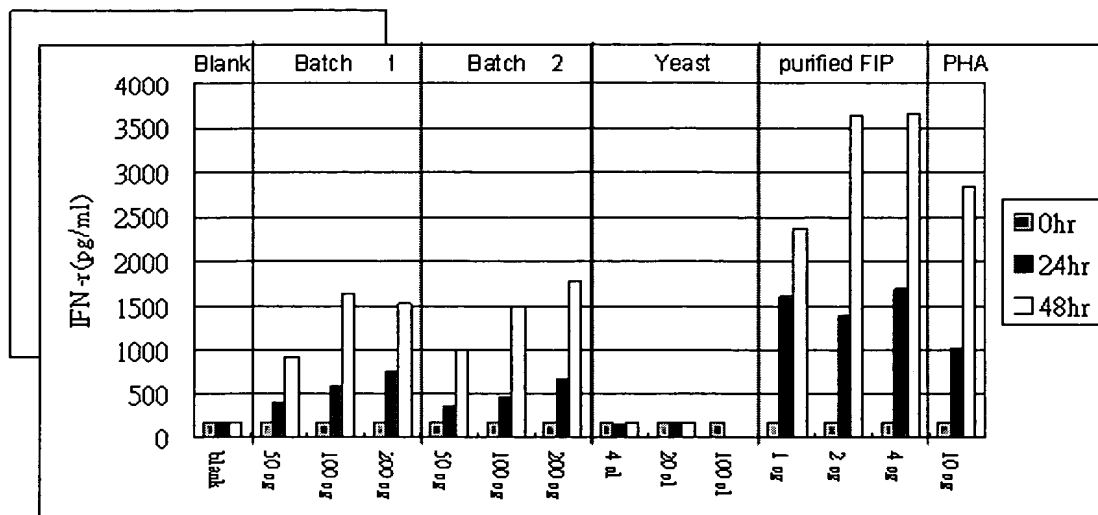
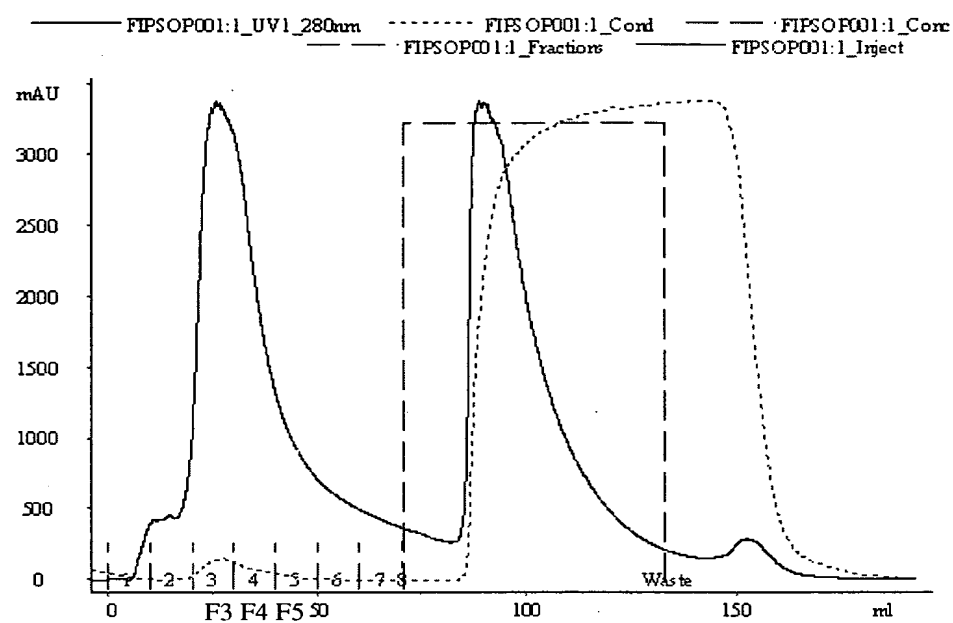


Figure 12

(I)



(II)

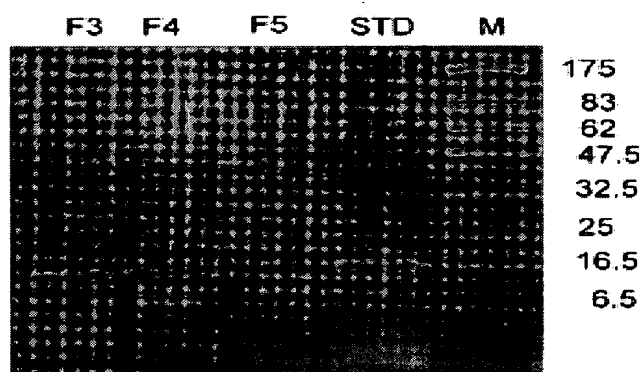


FIGURE 13

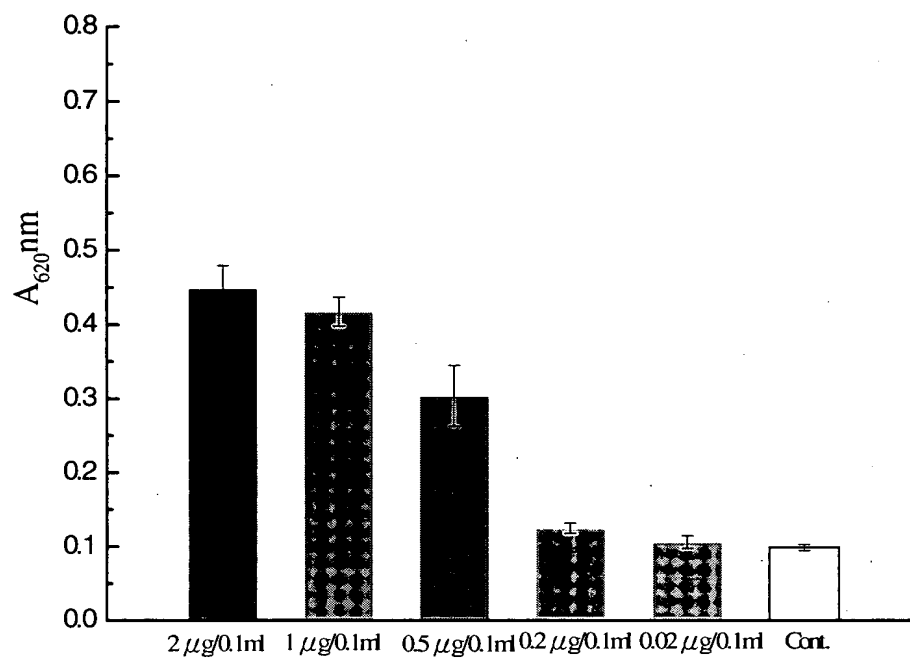


Figure 14

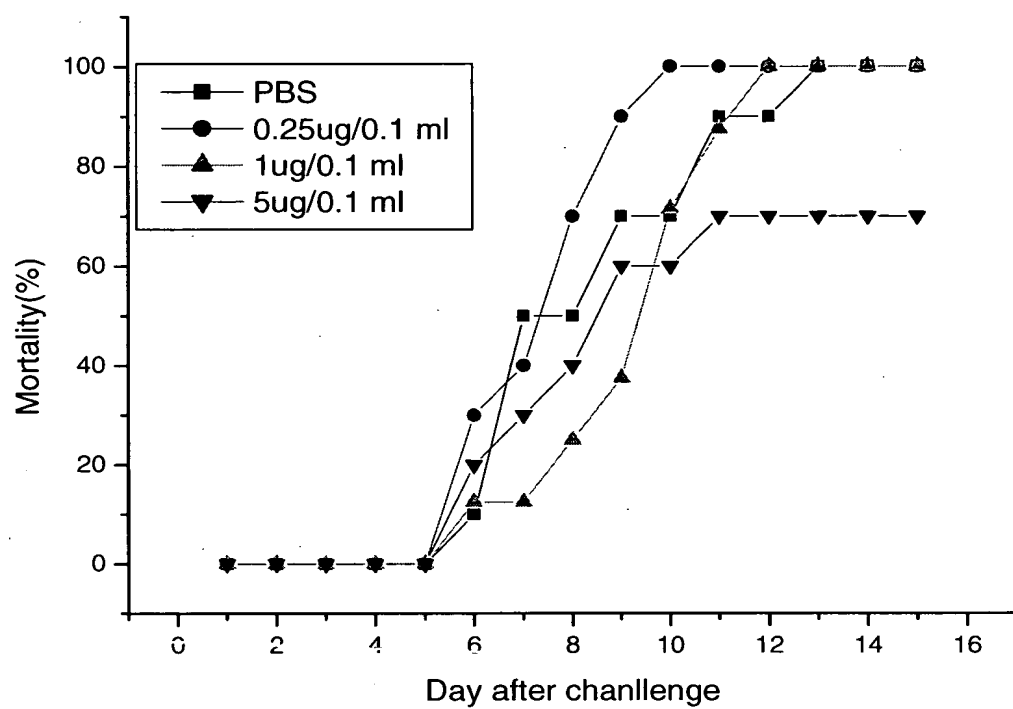


Figure 15

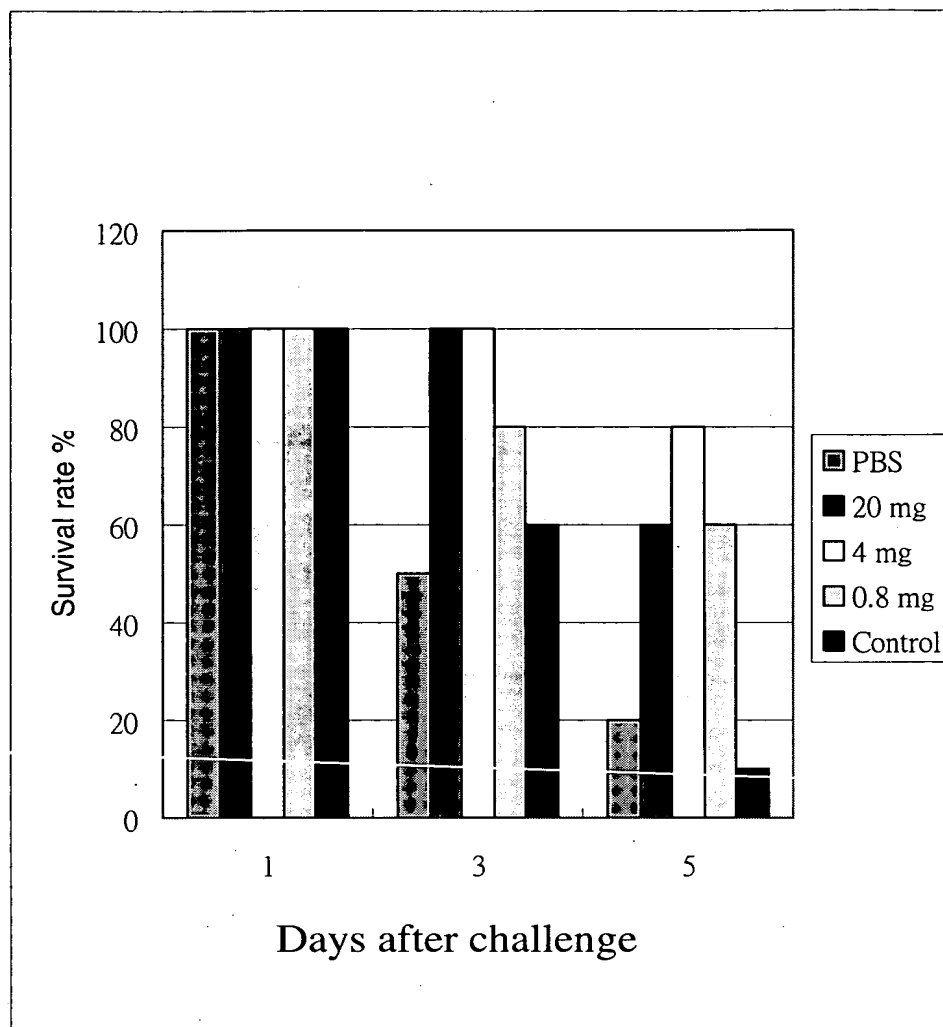


Figure 16

